



INSPECTION REPORT

PH PARAGLIDERS HARNESS

Declaration conformity number: PH 127.2015

TEST SAMPLE DATA

Manufacturer name: **Supair Sàrl**
Contact person: **Laurent Chiabaut**
Street: **34, rue Adrastée**
Post code / place: **74650 Chavanod**
Country: **France**

Harness manufacturer name: **Minimax 2**
Harness manufacturer size: **na**
Serial number of the test sample: **2165 07 10**
Harness type: **ABS passenger**
Maximum certified pilot weight [kg]: **100**
Harness protector type: **Airbag**
Harness weight [kg]: **2.94**
Volume reserve parachute container [cm3] Min: **n/a** Max: **n/a**
Atmosphere [°C] RH [%] [hPa]: **22.7 / 53 / 1019.6**
Test responsible: **Alain Zoller**
Inspection place: **Villeneuve**
Sample reception date: **14.08.2015**

Place of declaration: **Villeneuve**
Date of issue: **28.08.2015**
Director management: **Alain Zoller**

Signature: _____

Air Turquoise SA, having thoroughly assessed the sample mentioned hereunder, declare it was found conform with all requirements defined by the following norms

European Standard **EN1651** September 1999

European Standard **EN12491** September 2001

Airworthiness requirements for hang gliders and paragliders **LTF 2009** as published in NfL 91/09 chapter 4 and 6

Present declaration's scope only extends to the conformity of a given sample, on a given date and in a given place – as mentioned here above.

This inspection report contain the following test and is complet with the test report **PH ID 0 to 12, ST and RD**

Declaration conformity number: PH 127.2015

A. STRUCTURAL STRENGTH TESTS

A test plan was set up in order to execute the different tests in an efficient order. The table below summarizes this test plan together with the applicable standards and results

Test ID	TESTED ?	Standard Ref.		TEST setup	Anchoring		Forces		Min. Test duration [sec]	Result
		EN 1651	LTF		Attach -ment points	Dummy	Req. Load in [g] force	Min. force [N]		
R0	✓	5.3.2.1		Default flying position	2 main attachment points	Hip fixated	6	6000	10	POSITIV
R1	✓		4.2.1.a				9	9000		POSITIV
R2	✓	5.3.2.2					15	15000	5	POSITIV
R3	✓		4.2.1.b	Default, landing position	2 main att. points	Hip fixated,	6	6000	10	POSITIV
R4	✓	5.3.2.7				landing conf.	15	15000	5	POSITIV
R5			4.2.1.a rescue	Rescue	2 rescue att. Pnts.	Hip fixated	9	9000	10	n/a
R6		5.3.2.4					15	15000	5	n/a
R7			4.2.1.b rescue			Rescue, landing	Hip fixated, landing conf.	6	6000	10
R8	✓	5.3.2.3		One riser	ONE main att.	1 central hip fixation	6	6000	10	POSITIV
R9		5.3.2.5	4.2.1.d	Towing	2 main att. + 2 tow att.	None	3	3000	10	n/a
							5	5000		
R10	✓	5.3.2.6		Default, Negatif	One main att.	Head fix.	4.5	4500	10	POSITIV
R11	✓		4.2.1.c	Upside down	2 main att. downw.	Head fix.	6	6000	10	POSITIV
R12	✓		4.2.1.c rescue	Upside down rescue	2 rescue att. downw.		6	6000	10	POSITIV

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Declaration conformity number: PH 127.2015

B. PARAGLIDER HARNESS BACK PROTECTORS

Shock impact tests have to be executed on these harnesses in order to prove the damping characteristics of it. Most paraglider harnesses are equipped with a protection device that damps the shock on the pilot's spine during a hard landing

Test ID	TESTED ?	Standard	TEST setup	Test configuration	Impact at 165 cm (Seat plate)			Results
		LTF			Max Peak impact force [g]	Impact duration at 38 [g] (if any) recorded: [ms]	Impact duration at 20 [g] (if any) recorded: [ms]	
PRO TECT 1	✓	5.1.1	Default flying position	Test sample is attached to the dummy like a pilot in flight. Sample temperature +20+25°C without rescue	0.00	0.00	0.00	n/a
PRO TECT 2	✓	5.1.1	Default flying position	Test sample is attached to the dummy like a pilot in flight. Sample temperature +20+25°C with rescue	0.00	0.00	0.00	n/a
PRO TECT 3	✓	5.1.1	Default flying position	Test sample is attached to the dummy like a pilot in flight. Sample temperature -10+5°C without rescue	0.00	0.00	0.00	n/a
PRO TECT 4	✓	5.1.1	Default flying position	Test sample is attached to the dummy like a pilot in flight. Sample temperature -10+5°C with rescue	0.00	0.00	0.00	n/a

C. RESCUE DEPLOYMENT RESISTANCE TEST

The deployment of the rescue system has to be ensured in all circumstances of flight. This test is to verify whether the force needed to deploy is in between reasonable limits

Test ID	TESTED ?	Standard Ref.	TEST setup	Anchoring		Force for single hand deployment		Result
		LTF		Attach- ment points	Dummy	Min. Max. [N]	Resistance measured [N]	
RRDT	✓	6.1.5	Default flying position	Test sample is attached to the dummy like a pilot in flight.		20	-17.0	na
				(no dummy required)		70		na

D. RESCUE DEPLOYMENT STRAP STRENGTH TEST

The connection between handgrip and inner container has to have sufficient load capacity/structural strength in any situation that may arise during normal use. During this test is verified, whether this connection fulfill the requirements

Test ID	TESTED ?	Standard Ref.		TEST setup	Minimum force [N]	Min. Test duration	Breaking resistance measured [N]	Result
		LTF	EN 12491			[s]		
RRST		6.1.8	5.3.2	Connection strap in tensile testing machine	700	10	-17.0	n/a

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HARNES STRUCTURAL STRENGTH TEST

TEST REPORT PH ID 0

PH PARAGLIDERS HARNES

PH 127.2015

Manufacturer name: **Supair Sàrl**
 Harness manufacturer name: **Minimax 2**
 Test place & date: **Villeneuve**
 Test responsible: **Alain Zoller**
 Atmosphere [°C] RH [%] [hPa]: **22.7 / 53 / 1019.6**
 Maximum certified pilot weight [kg]: **100**
 Serial number of the test sample: **2165 07 10**

Directives: **EN 1651**

Test standard §: **5.3.2.1 (EN)**

Test setup: **Default flying position**

Anchoring:

Attachment points: **Both main riser attachments (3, 4)**

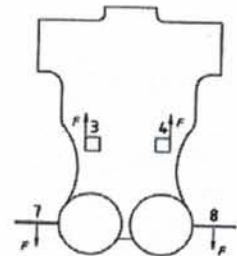
Dummy: **Default, hip fixed (7, 8)**

Required load in force [g] : **6**

Minimum load [N]: **6000**

Required test load in [N]: **612**

Min. duration [s]: **10**



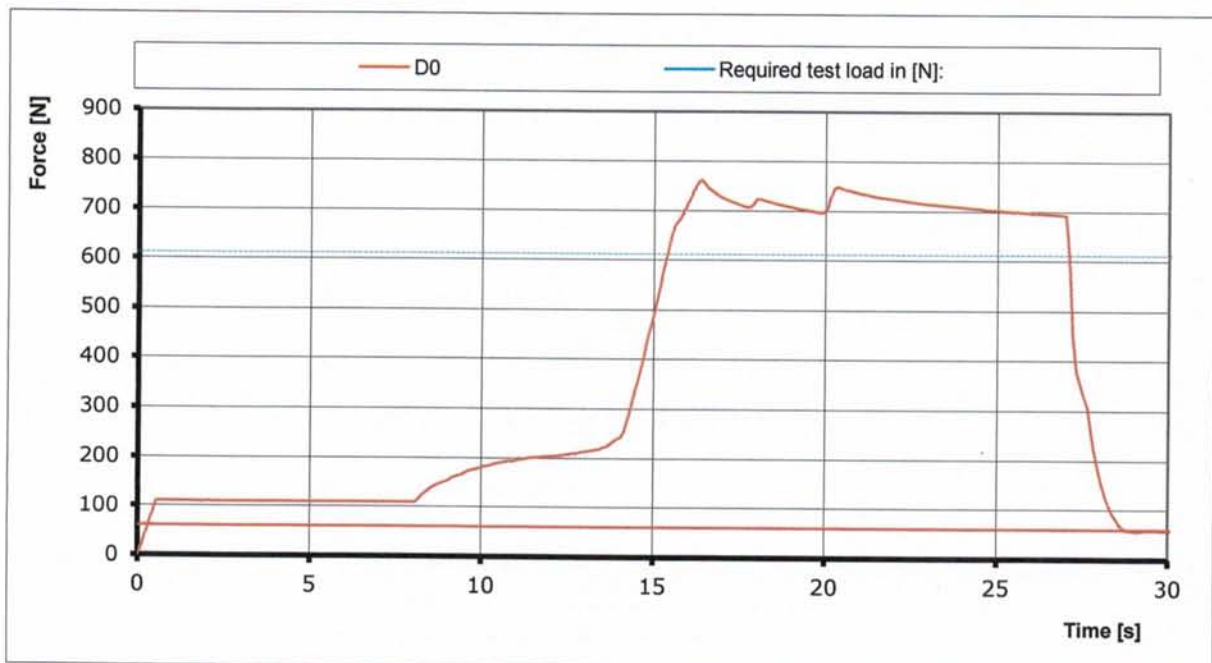
Results

Duration of maintained min. load [s]: **13.56**

Any signs of structural failure after this test: **no failure**

Test result: **POSITIV**

Graph: **D0**



Instruments	Validity	Manufacturer	Type nr.	S/N
Load sensor	2017			
Geos n°11 Skywatch	07.04.2017	JDC electronics	Geos n° 11	0022

HARNES STRUCTURAL STRENGTH TEST

TEST REPORT PH ID 1

PH PARAGLIDERS HARNES

PH 127.2015

Manufacturer name: **Supair Sàrl**
 Harness manufacturer name: **Minimax 2**
 Test place & date: **Villeneuve**
 Test responsible: **Alain Zoller**
 Atmosphere [°C] RH [%] [hPa]: **22.7 / 53 / 1019.6**
 Maximum certified pilot weight [kg]: **100**
 Serial number of the test sample: **2165 07 10**

Directives: **NfL II 91 / 09**

Test standard §: **4.2.1 a (LTF DV)**

Test setup: **Default flying position**

Anchoring:

Attachment points: **Both main riser attachments (3, 4)**

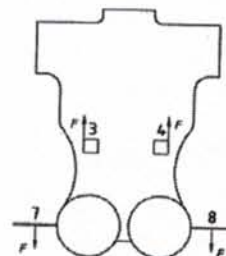
Dummy: **Default, hip fixed (7, 8)**

Required load in force [g] : **9**

Minimum load [N]: **9000**

Required test load in [N]: **917**

Min. duration [s]: **10**



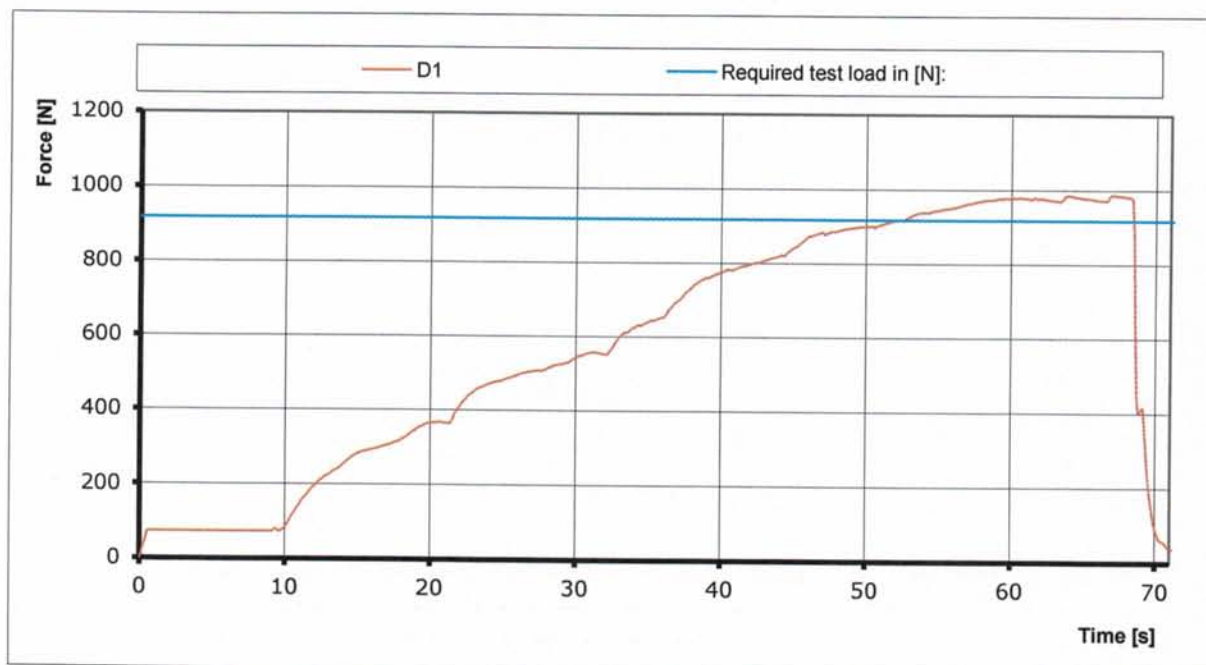
Results

Duration of maintained min. load [s]: **10.67**

Any signs of structural failure after this test: **no failure**

Test result: **POSITIV**

Graph: **D1**



Instruments	Validity	Manufacturer	Type nr.	S/N
Load sensor	2017	0	0	0
Geos n°11 Skywatch	07.04.2017	JDC electronics	Geos n° 11	0022

HARNESS STRUCTURAL STRENGTH TEST

TEST REPORT PH ID 2

PH PARAGLIDERS HARNESS

PH 127.2015

Manufacturer name: **Supair Sàrl**
 Harness manufacturer name: **Minimax 2**
 Test place & date: **Villeneuve**
 Test responsible: **Alain Zoller**
 Atmosphere [°C] RH [%] [hPa]: **22.7 / 53 / 1019.6**
 Maximum certified pilot weight [kg]: **100**
 Serial number of the test sample: **2165 07 10**

Directives: EN 1651

Test standard §: **5.3.2.2**

Test setup: **Default flying position**

Anchoring:

Attachment points: **Both main riser attachments (3, 4)**

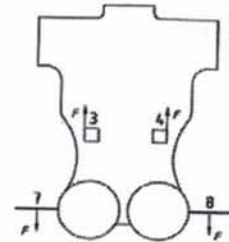
Dummy: **Default, hip fixed (7, 8)**

Required load in force [g] : **15**

Min load [N]: **15 000**

Required test load in [N]: **1529**

Min. duration [s]: **5**



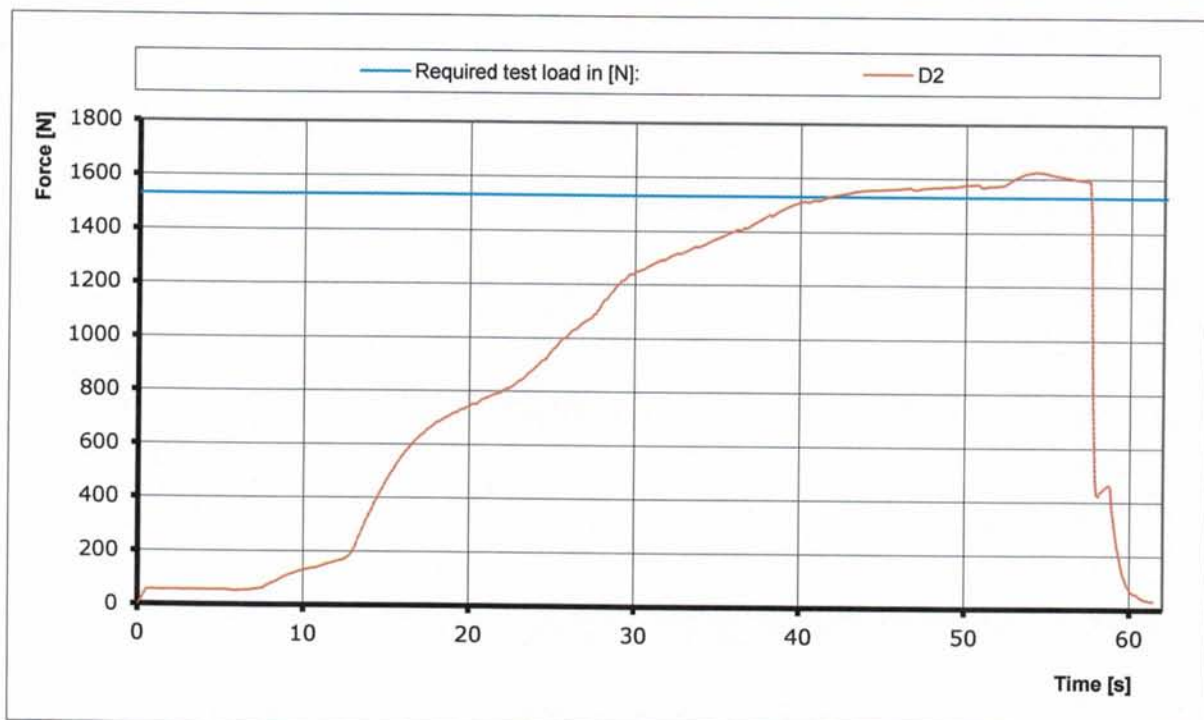
Results

Duration of maintained min. load [s]: **5.02**

Any signs of structural failure after this test: **no failure**

Test result: **POSITIV**

Graph: **D2**



Instruments	Validity	Manufacturer	Type nr.	S/N
Load sensor	2017	0	0	0
Geos n°11 Skywatch	07.04.2017	JDC electronics	Geos n° 11	0022

HARNES STRUCTURAL STRENGHT TEST

TEST REPORT PH ID 3

PH PARAGLIDERS HARNES

PH 127.2015

Manufacturer name: **Supair Sàrl**
 Harness manufacturer name: **Minimax 2**
 Test place & date: **Villeneuve**
 Test responsible: **Alain Zoller**
 Atmosphere [°C] RH [%] [hPa]: **22.7 / 53 / 1019.6**
 Maximum certified pilot weight [kg]: **100**
 Serial number of the test sample: **2165 07 10**

Directives: NfL II 91 / 09

Test standard §: **4.2.1.b**

Test setup: **Flying position before landing: seat board (11) in landing position, leg straps (10) closed.**

Attachment points: **Both of the main riser attachments attached (3 and 4);**

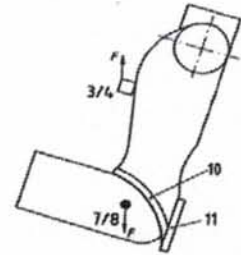
Dummy: **Default, hip fixed (7, 8)**

Required load in force [g] : **6**

Min load [N]: **6000**

Required test load in [N]: **612**

Min. duration [s]: **10**



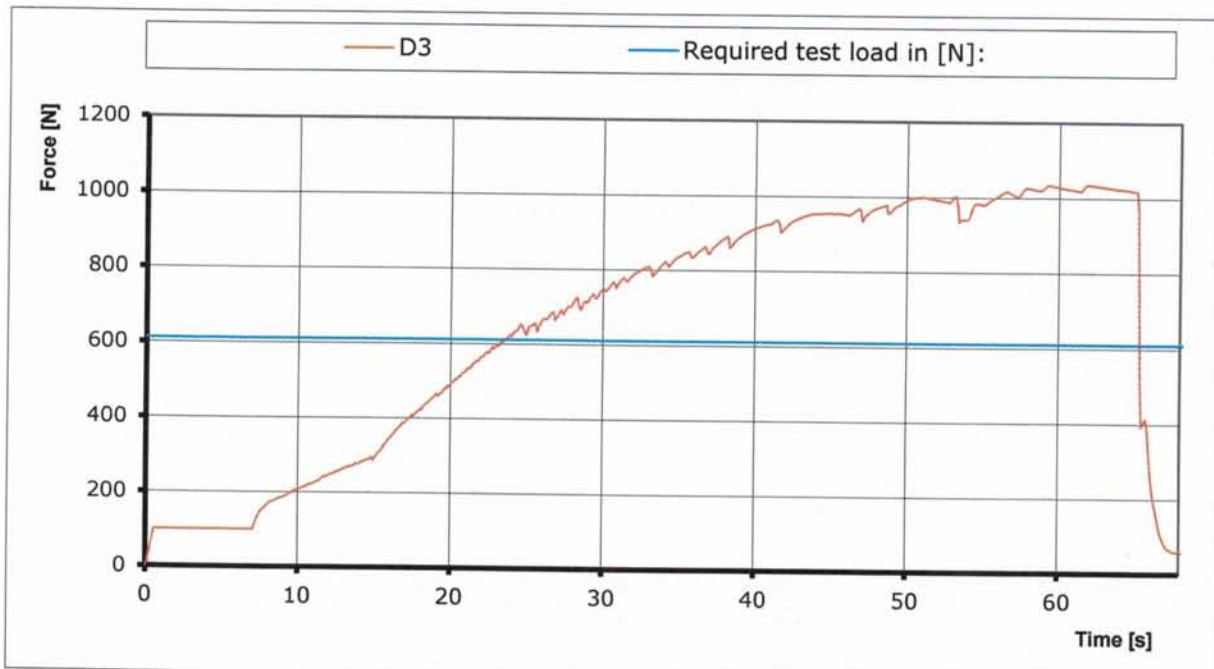
Results

Duration of maintained min. load [s]: **38.50**

Any signs of structural failure after this test: **no failure**

Test result: **POSITIV**

Graph: **D3**



Instruments	Validity	Manufacturer	Type nr.	S/N
Load sensor	2017	0	0	0
Geos n°11 Skywatch	07.04.2017	JDC electronics	Geos n° 11	0022

HARNES STRUCTURAL STRENGTH TEST

TEST REPORT PH ID 4

PH PARAGLIDERS HARNES

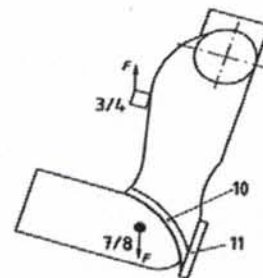
PH 127.2015

Manufacturer name: **Supair Sàrl**
 Harness manufacturer name: **Minimax 2**
 Test place & date: **Villeneuve**
 Test responsible: **Alain Zoller**
 Atmosphere [°C] RH [%] [hPa]: **22.7 / 53 / 1019.6**
 Maximum certified pilot weight [kg]: **100**
 Serial number of the test sample: **2165 07 10**

Directives: EN 1651

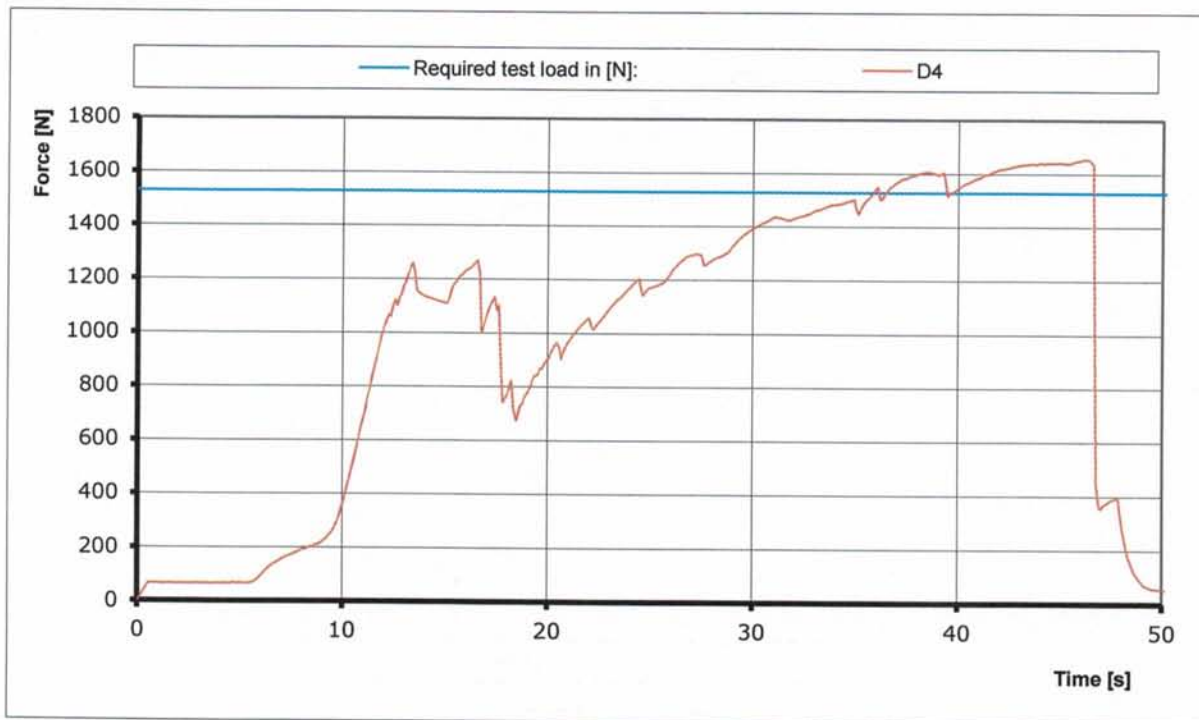
Test standard §: EN 5.3.2.7

Flying position before landing: **seat board (11) in landing position, leg straps (10) closed.**
 Test setup: **Both of the main riser attachments attached (3 and 4);**
 Anchoring: **Dummy: Default, hip fixed (7, 8)**
 Required load in force [g] : **15**
 Min load [N]: **15000**
 Required test load in [N]: **1529**
 Min. duration [s]: **5**



Results

Duration of maintained min. load [s]: **5.04**
 Any signs of structural failure after this test: **no failure**
 Test result: **POSITIV**
 Graph: **D4**



Load sensor	2017	0	0	0
Geos n°11 Skywatch	42832	JDC electronics	Geos n° 11	0022
0	00.01.1900	0	0	0

HARNES STRUCTURAL STRENGHT TEST

TEST REPORT PH ID 8

PH PARAGLIDERS HARNES

PH 127.2015

Manufacturer name: **Supair Sàrl**
 Harness manufacturer name: **Minimax 2**
 Test place & date: **Villeneuve**
 Test responsible: **Alain Zoller**
 Atmosphere [°C] RH [%] [hPa]: **22.7 / 53 / 1019.6**
 Maximum certified pilot weight [kg]: **100**
 Serial number of the test sample: **2165 07 10**

Directives: EN 1651

Test standard §: **5.3.2.3**

Test setup: **Only one riser attached**

Anchoring:

Attachment points: **One main riser attachments (3)**

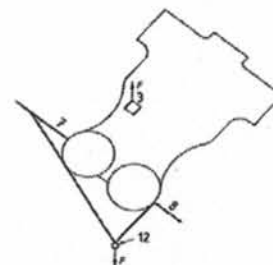
Dummy: **Hip fixed (7, 8 -> 12)**

Required load in force [g] : **6**

Min load [N]: **6000**

Required test load in [N]: **612**

Min. duration [s]: **10**



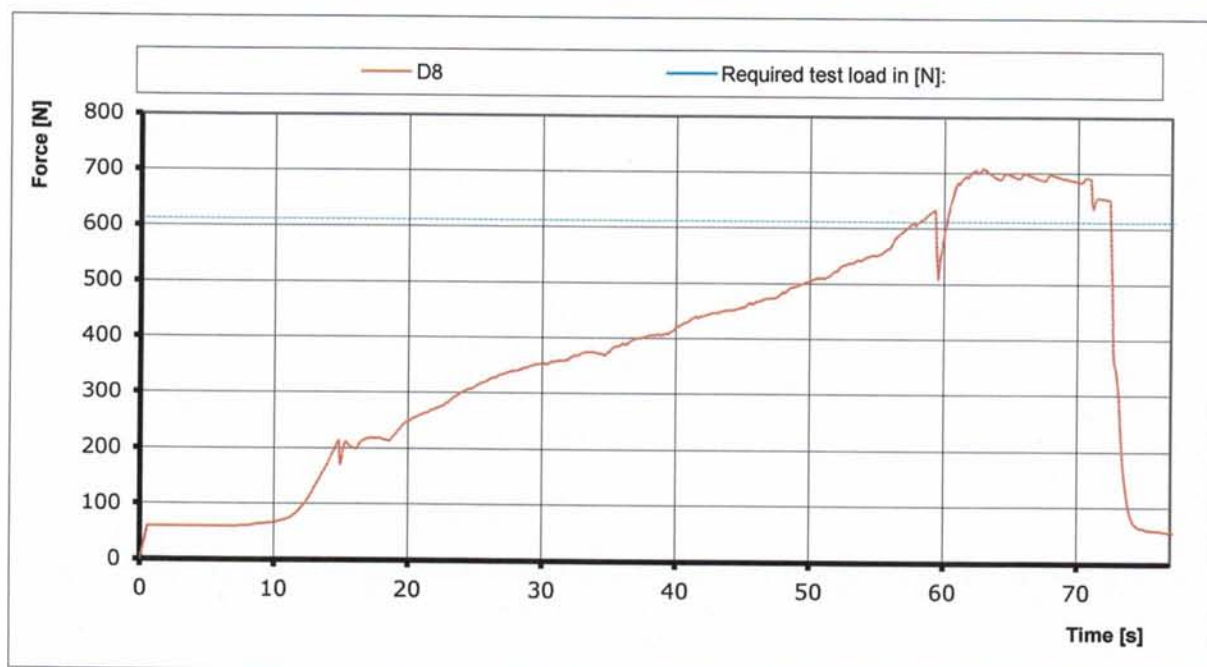
Results

Duration of maintained min. load [s]: **11.21**

Any signs of structural failure after this test: **no failure**

Test result: **POSITIV**

Graph: **D8**



Load sensor	2017	0	0	0
Geos n°11 Skywatch 42832	JDC electronics	Geos n° 11	0022	
0	00.01.1900	0	0	0

HARNES STRUCTURAL STRENGHT TEST

TEST REPORT PH ID 10

PH PARAGLIDERS HARNES

PH 127.2015

Manufacturer name: **Supair Sàrl**
 Harness manufacturer name: **Minimax 2**
 Test place & date: **Villeneuve**
 Test responsible: **Alain Zoller**
 Atmosphere [°C] RH [%] [hPa]: **22.7 / 53 / 1019.6**
 Maximum certified pilot weight [kg]: **100**
 Serial number of the test sample: **2165 07 10**

Directives: EN 1651

Test standard §: **5.3.2.6**

Test setup: **Normal flying position in NEGATIF**

Anchoring:

Attachment points: **ONE of the main riser attachments attached downwards(3 or 4);**

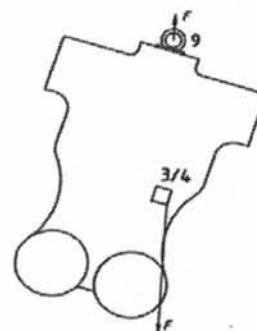
Dummy: **Dummy anchored at the head position (9)**

Required load in force [g]: **4.5**

Min load [N]: **4500**

Required test load in [N]: **459**

Min. duration [s]: **10**



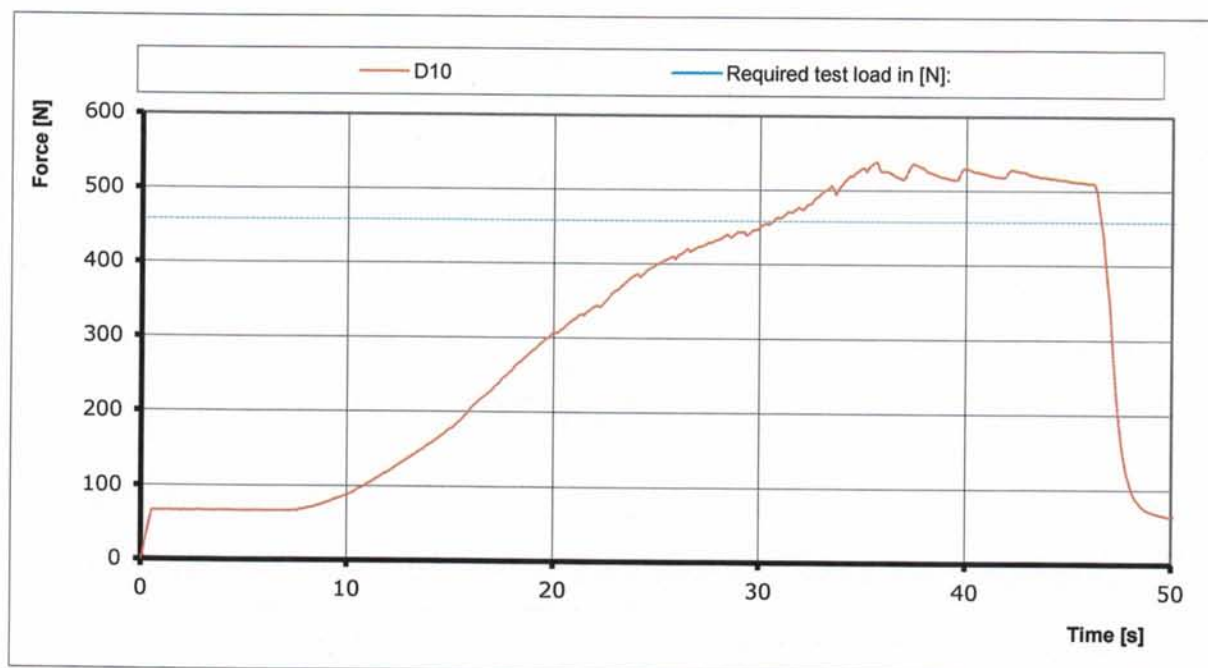
Results

Duration of maintained min. load [s]: **10.65**

Any signs of structural failure after this test: **no failure**

Test result: **POSITIV**

Graph: **D10**



Instruments	Validity	Manufacturer	Type nr.	S/N
Load sensor	2017	0	0	0
Geos n°11 Skywatch	07.04.2017	JDC electronics	Geos n° 11	0022

HARNES STRUCTURAL STRENGHT TEST

TEST REPORT PH ID 11

PH PARAGLIDERS HARNES

PH 127.2015

Manufacturer name: **Supair Sàrl**
 Harness manufacturer name: **Minimax 2**
 Test place & date: **Villeneuve**
 Test responsible: **Alain Zoller**
 Atmosphere [°C] RH [%] [hPa]: **22.7 / 53 / 1019.6**
 Maximum certified pilot weight [kg]: **100**
 Serial number of the test sample: **2165 07 10**

Directives: NfL II 91 / 09

Test standard §: **4.2.1.c**

Test setup: **Pilot upside down flying position**

Anchoring:

Attachment points: **Both of the main riser attachments attached downwards (3 and 4);**

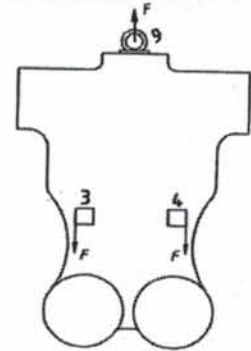
Dummy: **Dummy anchored at the head position (9)**

Required load in force [g] : **6**

Min load [N]: **6000**

Required test load in [N]: **612**

Min. duration [s]: **10**



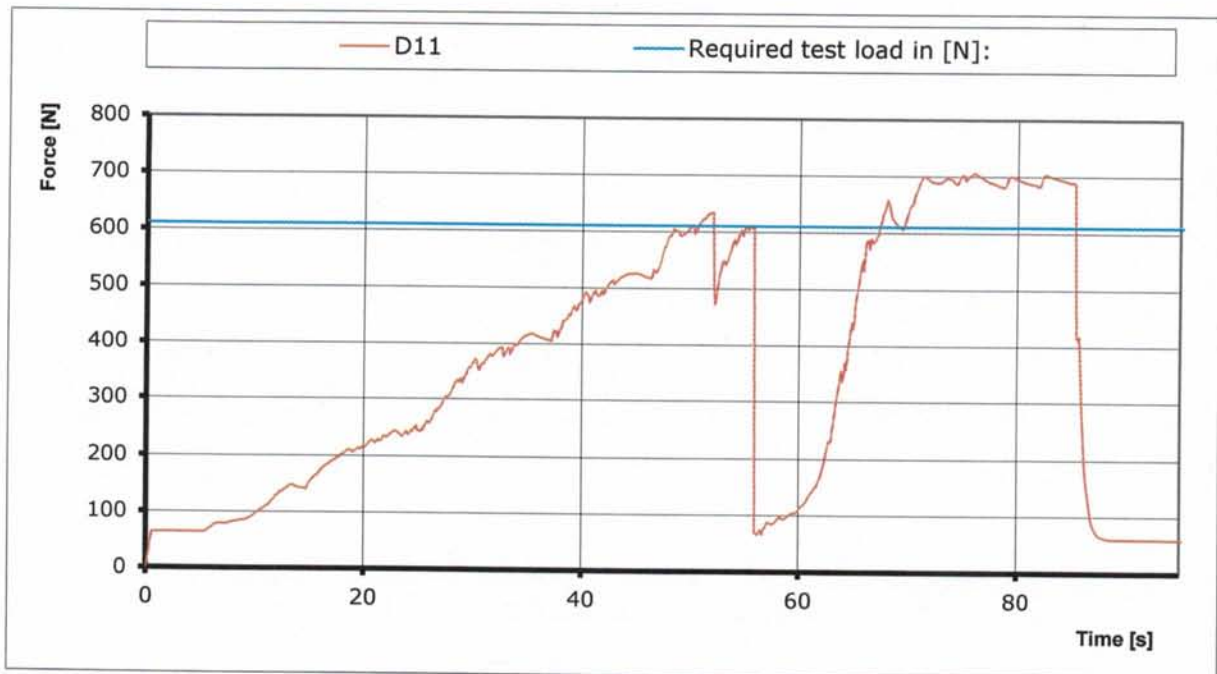
Results

Duration of maintained min. load [s]: **11.23**

Any signs of structural failure after this test: **no failure**

Test result: **POSITIV**

Graph: **D11**



Instruments	Validity	Manufacturer	Type nr.	S/N
Load sensor	2017	0	0	0
Geos n°11 Skywatc	07.04.2017	JDC electronics	Geos n° 11	0022

HARNESS STRUCTURAL STRENGTH TEST

TEST REPORT PH ID 12

PH PARAGLIDERS HARNESS

PH 127.2015

Manufacturer name: **Supair Sàrl**
 Harness manufacturer name: **Minimax 2**
 Test place & date: **Villeneuve**
 Test responsible: **Alain Zoller**
 Atmosphere [°C] RH [%] [hPa]: **22.7 / 53 / 1019.6**
 Maximum certified pilot weight [kg]: **100**
 Serial number of the test sample: **2165 07 10**

Directives: **NfL II 91 / 09**

Test standard §: **4.2.1.c rescue**

Test setup: **Pilot upside down flying position**

Anchoring:

Attachment points: **Both of the rescue riser attachments attached downwards (1 and 2);**

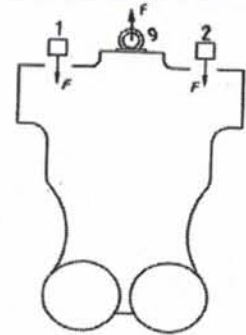
Dummy: **Dummy anchored at the head position (9)**

Required load in force [g] : **6**

Min load [N]: **6000**

Required test load in [N]: **612**

Min. duration [s]: **10**



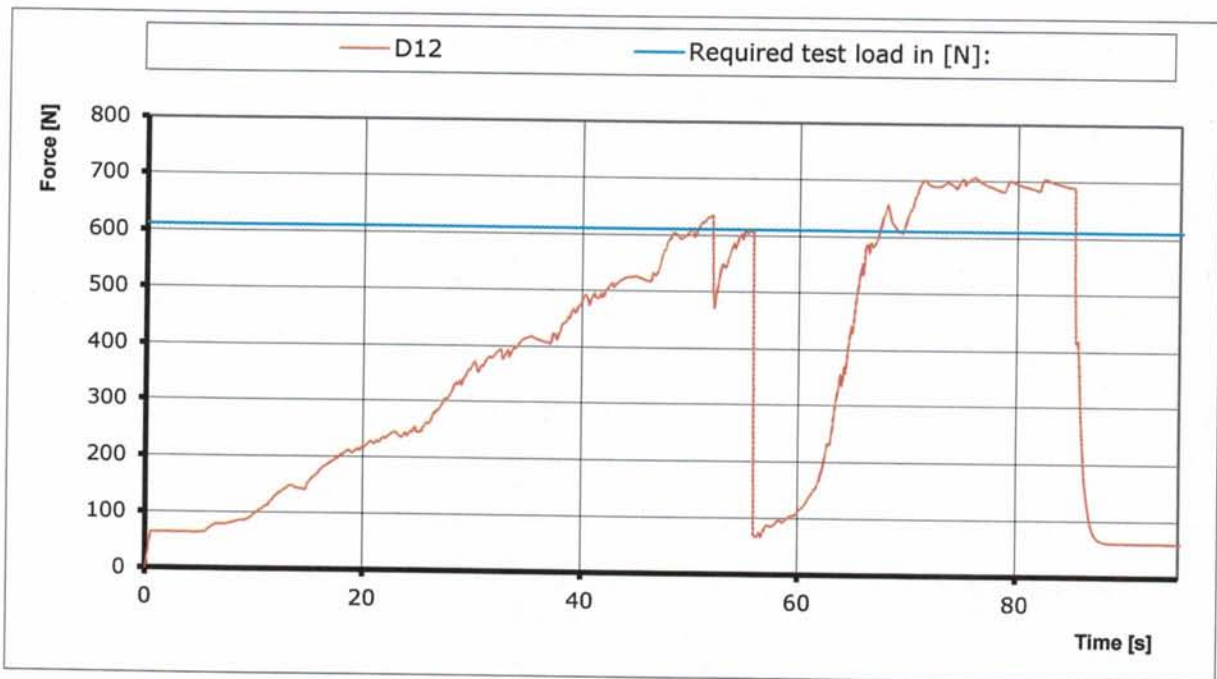
Results

Duration of maintained min. load [s]: **10.57**

Any signs of structural failure after this test: **no failure**

Test result: **POSITIV**

Graph: **D12**



Instruments	Validity	Manufacturer	Type nr.	S/N
Load sensor	2017	0	0	0
Geos n°11 Skywatch	07.04.2017	JDC electronics	Geos n° 11	0022